

IDEU830FS-US2 Intelligent Data Extension Unit Operational Description

The iDEU830FS-US2 is a wall or table-top mounted device for use in various offender presence monitoring applications.

The unit is primarily, but not exclusively, designed as a repeater to extend the range of bracelet tags attached to the ankle of the person monitored by the system. The bracelet tag transmissions received by the iDEU830FS-US2 on the frequency 433.92MHz are forwarded on the frequency 318MHz to a home unit installed at the offender's home. Violations to the offender's curfew schedule generate events that are uploaded to the central monitoring station via various communication interfaces.

When a transmission is received that is addressed specifically to the iDEU (i.e. it includes the iDEU's ID), the transmission is handled by the iDEU as required. Handling the transmission could mean answering the source of the transmission or, alternatively, forwarding the data to a home unit.

If a received transmission is not recognized, the transmission is discarded and no further action is taken by the iDEU.

If simultaneous transmissions are sent to the iDEU, the strongest transmission is received and handled. The maximum transmission time does not exceed 1.25msec.

The iDEU-830FS-US2 comprises two RF transceivers (318MHz and 433.92MHz) and two helical antennas. The unit is powered by a 100-240VAC to 12VDC power adapter and includes a 3.6V backup battery.

The iDEU-830FS-US2 sends sanity transmission every pseudorandom time from 82 up 156 seconds.

The electronic bracelet sends its message every pseudorandom time from 16.8 up 23.2 seconds.